

Amendments to the Claims:

1. (Currently Amended) A method of changing a functional surface binding specificity of a PAS domain, wherein the PAS domain is ~~predetermined, prefolded in its native state, and comprises a hydrophobic core that has no NMR apparent a priori formed ligand cavity~~ set forth by Genbank Accession No. AF387103, the method comprising the steps of:

introducing into the hydrophobic core of the PAS domain a foreign ligand of the PAS domain; and

detecting a resultant change in the functional surface binding specificity of the PAS domain, wherein the PAS domain is PAS kinase PAS A, and the binding specificity is manifested as a change in kinase activity.

2-20. (Canceled).